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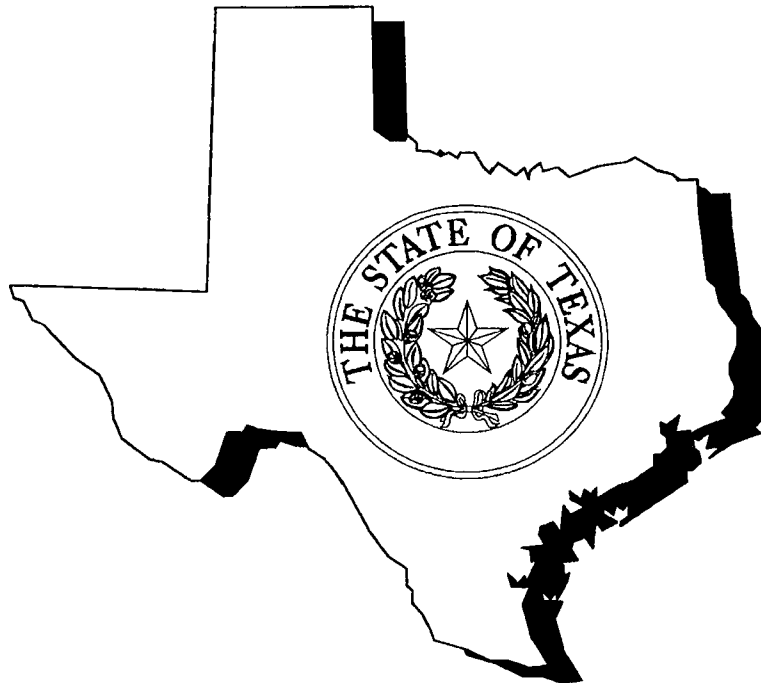
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**APPLICATION OF SOUTHWESTERN
ELECTRIC POWER COMPANY FOR
AUTHORITY TO CHANGE RATES**

§
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**BEFORE THE STATE OFFICE
OF
ADMINISTRATIVE HEARING**





DIRECT TESTIMONY OF
JOHN POOLE, P.E., ENGINEER
INFRASTRUCTURE DIVISION
PUBLIC UTILITY COMMISSION OF TEXAS

APRIL 7, 2021

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I. STATEMENT OF QUALIFICATIONS

Q. Please state your name, occupation, and business address.

A. My name is John Poole. I am employed by the Public Utility Commission of Texas (Commission) as an Engineer within the Infrastructure Division. My business address is 1701 North Congress Avenue, Austin, Texas, 78701.

Q. Please briefly outline your educational and professional background.

A. I have a Bachelor of Science degree in Electrical Engineering. I completed my degree in December 2014 and have been employed at the Commission since February 2015. A more detailed resume is provided in Attachment JP-1.

Q. Are you a registered professional engineer?

A. Yes, I am a registered Professional Engineer in Texas, and my member number is 133982.

Q. Have you previously testified as an expert before the Commission?

A. Yes. A list of previous testimony is provided in Attachment JP-2.

II. PURPOSE AND SCOPE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to present recommendations concerning Southwestern Electric Power Company's (SWEPCO) application in this docket. My testimony partially addresses the following issue identified in the December 17, 2020 Preliminary Order:¹

8. What is the appropriate overall rate of return, return on equity, and cost of debt for SWEPCO? When answering this issue, please address how the factors specified in PURA § 36.052 and 16 TAC § 25.231(c)(1) should affect SWEPCO's rate of return.²

Q. If you do not address an issue or position in your testimony, should that be interpreted as support for SWEPCO's position on that issue?

A. No. The fact that I do not address an issue or position in my testimony should not be construed as agreeing with, endorsing, or consenting to any position taken by SWEPCO.

Q. Have you prepared any documents supporting your testimony?

A. Yes. They are included as attachments to my testimony.

Q. Were these attachments prepared by you or under your supervision?

A. Yes.

¹ Preliminary Order (Dec. 17, 2020).

² *Id.* at 6.

1 **III. RECOMMENDATIONS ON TRANSMISSION ISSUES**

2 **Q. Which regulations are you primarily relying on for your recommendations?**

3 A. I am relying on PURA³ § 36.052, which states:

4 In establishing a reasonable return on invested capital, the regulatory authority
5 shall consider applicable factors, including:

6 (1) the efforts and achievements of the utility in conserving resources;

7 (2) the quality of the utility's services;

8 (3) the efficiency of the utility's operations; and

9 (4) the quality of the utility's management.

10 My recommendation for a return on equity (ROE) reduction is based on subsections (2)
11 the quality of the utility's service, and (4) the quality of the utility's management.

12 I am also relying on 16 Texas Administrative Code (TAC) § 25.52(b)(1), which
13 states in part: "Every utility shall make all reasonable efforts to prevent interruptions of
14 service" On the basis of these regulations, I recommend an ROE reduction and
15 engaging an independent contractor to review SWEPCO's transmission system.

16
17 **Q. Has SWEPCO had quality of service issues with its transmission system?**

18 A. Yes. Generally, transmission lines carry electric energy at higher voltages and for longer
19 distances than distribution lines. Safety constraints require that transmission poles be
20 much taller than their distribution counterparts. Nevertheless, SWEPCO allowed
21 vegetation to reach transmission conductors, which are much higher above ground than
22 distribution conductors. SWEPCO allowed vegetation to grow high enough to reach

³ Public Utility Regulatory Act, Tex. Util. Code Ann. §§ 11.001-66.016 (PURA).

1 transmission conductors to the point that the vegetation was the initial, as well as a
2 primary, cause of a major outage that began August 18, 2019 and lasted for
3 approximately 12 hours (the Outage). On that Sunday afternoon, SWEPCO experienced
4 multiple, cascading interruptions on its transmission grid in Texas. These interruptions
5 not only affected parts of SWEPCO's transmission grid, but they also affected electric
6 cooperatives that were directly connected to SWEPCO's transmission lines. [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 Vegetation had grown to a such a degree that SWEPCO spent \$1,095,104.23 for
14 vegetation management in direct response to the Outage, while \$34,308.59 had to be
15 spent on transmission line, substation, and protection work.⁶ In addition, SWEPCO
16 submitted information to Staff on November 14, 2019 that included four pictures that
17 showed vegetation under some transmission lines was very developed, and in two cases
18 there were mature trees reaching the lines.⁷

4 [REDACTED]

5 [REDACTED]

6 Attachment JP-3.

7 [REDACTED]

1 **Q. Please describe the sequence of events that led to the Outage.**

2 A. The outage began at approximately 3:59 p.m. on August 18, 2019. [REDACTED]

3 [REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [REDACTED]

4 [REDACTED]

5 [REDACTED]

6 [REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

			Overload
I	[REDACTED]	[REDACTED]	[REDACTED] [REDACTED] [REDACTED]
I	[REDACTED]	[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]

1 [REDACTED]

2 [REDACTED]

3 [REDACTED] [REDACTED]

4 [REDACTED]

5 [REDACTED]

8 A. SWEPCO serves approximately 187,400 retail customers in Texas.⁹ [REDACTED]
9 [REDACTED]
10 [REDACTED]

8 [REDACTED]

⁹ Application at 3.

10 [REDACTED]

11 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]

5

6 **Q. Has SWEPCO provided any explanation for how vegetation grew into its**
7 **transmission lines?**

8 A. Yes. SWEPCO reported that the area around these transmission lines experienced
9 unusually high rainfall and warm temperatures in 2019 that increased vegetation
10 growth.¹⁶ However, it would have taken a number of years for the trees to reach the
11 height shown in the right-of-way in SWEPCO's report to Staff,¹⁷ and the annual rainfall
12 report included in SWEPCO's report shows that rainfall over the previous decade was not
13 unusual.¹⁸ It is my opinion that prudent vegetation management on the Knox-Pirkey Line
14 and the Pirkney-to-Whitney 138-kV Line during 2010-2019 would have prevented the
15 cascading interruptions.¹⁹

12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]

¹⁹ In the last three base-rate dockets, SWEPCO made one request, in Docket No. 40443, for a post test-year increase in money for transmission vegetation management. That \$1 million increase above the \$3.1 million test-year amount was approved in SWEPCO's last base-rate docket, 40443.

1 **Q. Apart from the direct impact of the Outage on retail customers and the**
2 **communities where they are located, do you have other concerns about the outage?**

3 A. Yes. The fact that SWEPCO maintained its system in a manner that would allow
4 cascading interruptions affecting numerous transmission lines²⁰ is troubling. In addition
5 to the inadequate vegetation management, some of transmission lines in SWEPCO's
6 system had been in service for 50 or more years. In SWEPCO's response to Cities
7 Advocating Reasonable Deregulation's (CARD) Ninth RFI,²¹ SWEPCO listed several
8 circuits that had recently been rebuilt. Included in this list were many old, poorly
9 performing transmission lines that had been in service since the 1930s, 40s, and 50s.²²
10 Further, SWEPCO provided system average interruption duration index (SAIDI), system
11 average interruption frequency index (SAIFI), and customer minutes interrupted (CMI)
12 data for these lines, along with the overall transmission system performance for the past
13 ten calendar years and in-service dates for rebuilds of transmission lines.²³ The data
14 shows that following the in-service dates of the rebuilds for those lines, overall system
15 reliability did not appreciably increase.²⁴ This result raises a concern that not all issues
16 related to poorly performing transmission lines have been adequately addressed by
17 SWEPCO.

20 [REDACTED]

21 Attachment JP-5 at 32.

22 *Id.* at 32.

23 *Id.* at 30, 73-75, 77, 79, 81, 83.

24 *Id.* at 30, 79.

1 **Q. With respect to the Outage, did SWEPCO meet the requirement in 16 TAC**
2 **§ 25.52(b)(1) that it make all reasonable efforts to prevent interruptions of service?**

3 A. No. Based on the issues I have described, vegetation management issues and poorly
4 performing transmission facilities in its system, it is my opinion that SWEPCO did not.
5

6 **Q. What is your first recommendation on how to address the Outage?**

7 A. I recommend that SWEPCO's ROE be reduced by approximately \$1.13 million based on
8 the poor quality of its services and management, as evidenced by the Outage. This
9 amount is approximately equal to the costs incurred by SWEPCO in response to the
10 Outage, which were largely for vegetation management.
11

12 **Q. In addition to an ROE reduction, what do you recommend to address the service**
13 **quality problems on SWEPCO's transmission system?**

14 A. In order to help ensure such a large transmission outage does not reoccur, I recommend
15 that an independent contractor conduct a comprehensive review of SWEPCO's existing
16 transmission system and make recommendations for needed improvements, including
17 vegetation management practices, facilities replacement, and system protection.
18

19 **Q. Has the Commission previously ordered an ROE reduction and an independent**
20 **contractor review because of a utility's poor reliability and management?**

21 A. Yes. In Docket No. 16705, *Application of Entergy Texas for Approval of Its Transition to*
22 *Competition Plan and the Tariffs Implementing the Plan and for the Authority to*

1 *Reconcile Fuel Costs to Set Revised Fuel Factors and to Recover a Surcharge for*
2 *Underrecovered Fuel Costs*,²⁵ and Docket No. 18249, *Entergy Gulf States, Inc. Service*
3 *Quality Issues (Severed from Docket No. 16705)*,²⁶ the Commission ordered an ROE
4 reduction and an independent contractor review due to service quality concerns.

5
6 **IV. CONCLUSION**

7
8 **Q. Please summarize your recommendations.**

9 A. After a review of the causes and results of the August 18 and 19, 2019 outage on
10 SWEPCO's transmission network, and in accordance with the requirements of PURA
11 § 36.052 and TAC § 25.52(b)(1), I recommend an ROE reduction of approximately \$1.13
12 million. I also recommend the Commission order SWEPCO to hire an independent
13 contractor to promptly conduct a comprehensive review of SWEPCO's transmission
14 system and make recommendations for needed improvements, including vegetation
15 management practices, facilities replacement, and system protection. Finally, I
16 recommend that the Commission open a compliance docket in which SWEPCO is
17 required to file reports regarding the hiring and use of the independent consultant,
18 including the request for proposal to perform the work, a notification of the selection of
19 the independent consultant, a timeline for the consultant's work, and the consultant's
20 reports and recommendations.

²⁵ *Application of Entergy Texas for Approval of Its Transition to Competition Plan and the Tariffs Implementing the Plan and for the Authority to Reconcile Fuel Costs to Set Revised Fuel Factors and to Recover a Surcharge for Underrecovered Fuel Costs*, Docket No. 16705, Second Order on Rehearing at 18-19. (Jul. 22, 1998).

²⁶ *Entergy Gulf States, Inc. Service Quality Issues*, Docket No. 18249, Order on Rehearing at 28-29 (Apr. 22, 1998).

1 **Q.** **Does this conclude your testimony?**

2 **A.** Yes.